to in this Stipulation as "1000-man Units"). Plaintiffs have been furnished with certain drawings and specifications for the design of both the Michael-type Units and the 1000-man Units, and have submitted comments and suggestions for certain changes. By this Stipulation, the parties intend to resolve their differences with regard to the design of these units, in lieu of the arbitration process specified in section III.D.3 of the Crowding Stipulation. It is expressly understood that plaintiffs do not seek the construction of any new prison, and this Stipulation shall not be construed to require defendants to construct any prison; the intent of this Stipulation is to clarify, assuming new prisons are built, certain requirements that must be met to implement other orders of the Court.

2. With regard to the Michael Unit, the Michael-type Units the 1000-man Units and all future prisons, defendants shall comply with all conditions specified in subparagraphs a, b, c, e, f, h, i, k, and m of paragraph 3 of the Section III.D Crowding Stipulation. Defendants shall also permit minimum and medium custody prisoners (a) to go to and from their cells to dayrooms as freely and frequently as they choose from 7:30 a.m. to 10:00 p.m. on weekdays and from 7:30 a.m. to 1:00 a.m. on weekends and holidays except during counts and emergencies; and (b) to go to and from their cells or dayrooms to and from the covered outdoor recreation areas and passive recreation courtyards as freely and frequently as they choose from 7:30 a.m. to 10:00 a.m., 12:00 noon to 4:00 p.m., and 6:00 p.m. to 10:00 p.m. every day, except

not in final Judgment - hands on out

during counts and emergencies. Defendants shall provide all general population prisoners with reasonable daily access to the large uncovered recreation yards on weekdays and with reasonable daily access to the multi-purpose rooms (each of which shall be equipped with a television set), and the gymnasium, every day.

3. Defendants shall also do the following at the Michael Unit:

(a) Either (i) install electrical conduit to the desk in each cell, (ii) provide, at no charge to any prisoner who requests it, one heavy duty grounded extension cord per prisoner for use in his cell, or (iii) assure that all prisoner appliances have cords that reach to the desk.

(b) Regularly inspect general population windows for drafts and for operability, pursuant to a regular maintenance program.

(c) Provide one additional table with four seats in each general population dayroom.

4. The parties shall continue to negotiate in good faith and resolve certain design and maintenance problems, including acoustical treatment in dayrooms to reduce noise, that have been raised with regard to the Michael, Michael-type and 1,000-man Units.

5. Each Michael-type Unit shall contain at least 504 administrative segregation cells. The Michael Unit and each of the two additional Michael-type Units authorized by the

Legislature shall not have more than one-fourth of its general population prisoners classified as close custody.

6. If any new prisons are authorized to be constructed by the 71st Legislature, at least one of them (Michael-type or 1000-man) shall have all common areas accessible to wheelchair-bound prisoners so that such prisoners may fully participate in all programs offered at the prison, and sufficient fully accessible housing areas to accommodate a reasonable number of the wheelchair-bound prisoner population that TDC anticipates having in the foreseeable future, located in such a way as to foster integration and classification flexibility rather than to segregate the disabled prisoners in one housing area; provided, however, that if all new prisons authorized by the 71st Legislature are located in areas where it is exceptionally difficult to provide appropriate staff and services for wheelchair-bound prisoners, defendants shall retrofit at least one existing TDC unit, in addition to Jester III, to meet the requirements of this paragraph.

7. Defendants represent that the heating and ventilation system at the Michael Unit is designed to deliver at least 23.26 cubic feet of fresh air per minute per prisoner to each housing area, and that the systems for Michael-type units and 1000-man units will be designed to deliver at least that same amount to the housing areas. All such systems shall be used as designed.

8. With regard to at least one 1000-man Unit that has been authorized by the 70th Legislature and with regard to all future

prisons authorized by the 71st or future legislatures, defendants shall provide at least 35 square feet of dayroom space per prisoner, exclusive of circulation space, calculated at 95% of capacity for each housing area.

9. With regard to Michael-type and 1000-man Units and all future prisons, each general population cell shall have a window operable by the cell occupants, and windows shall be provided in all administrative segregation cells. Defendants shall provide adequate ventilation and tempered air circulation in administrative segregation areas. Each prehearing detention dayroom shall be equipped with a toilet and a drinking fountain. Two shelves shall be provided in all double occupancy cells in all future prisons, and lengthened shelves with a divider shall be provided in the Michael-type and 1000-man units authorized by the 70th Legislature. Showers shall be equipped with clothes hooks and a seat in the drying area. Plaintiffs accept defendants' assessment that current visiting load does not require the expansion of the visiting space. If demand increases such that visiting facilities become chronically overcrowded or visitors are forced to wait significant lengths of time, defendants shall construct adequate facilities by expanding visiting areas and not simply by altering or increasing permitted visiting times.

10. Section III.D.3 of the Crowding Stipulation shall be deemed not to require any six-month assessment after construction of any new prison (provided that this does not foreclose

plaintiffs from conducting appropriate discovery with regard to conditions at any prison) and not to require, with regard to the Michael Unit and all other prisons, any arbitration process with regard to prison design or construction. If defendants propose to construct a new prison using a different design or a significant modification of the design of Michael-type or 1000-man Units, they shall furnish plaintiffs with the architectural plans and specifications at least 60 days before the prison is sent out for bid, and shall respond in good faith to plaintiffs' reasonable suggestions for changes and make any change in the design needed to comply with the Court's orders in this action.

DATED: October 28, 1988

William Bennett Turner
Donna Brorby
Attorneys for Plaintiffs

DATED: October 31, 1988

Robert Ozer
Melinda H. Bozarth
Attorneys for Defendants

SO ORDERED:

DATED: _____

UNITED STATES DISTRICT JUDGE

5401

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF TEXAS
HOUSTON DIVISION

DAVID RUIZ, et al.,
Plaintiffs,
UNITED STATES OF AMERICA,
Plaintiff-Intervenor,
vs.
JAMES A. LYNAUGH, et al.,
Defendants.

CIVIL ACTION NO. H-78-987

STIPULATION REGARDING SECTION VIII.B
OF THE STIPULATION MODIFYING CROWDING PROVISIONS
OF AMENDED DECREE (CROWDING STIPULATION)

Section VIII.B.1 of the Crowding Stipulation requires defendants to "prepare a unit-by-unit inventory of the specific installations, replacements or repairs needed to remedy the major structural deficiencies described in Section VIII.B.2 [of the Crowding Stipulation]." Defendants prepared an inventory dated December 1986. Plaintiffs have had an opportunity to review the inventory and conduct physical inspections of the units.

Plaintiffs contend that TDC's inventory is not complete because it does not include certain items and classes of items discussed in the December 1987 report prepared by plaintiffs' experts, David Doering and Theodore Gordon.

Defendants desire agreement on (1) the items and classes of items that they are required to put on the inventory and correct in order to comply with Section VIII.B of the Crowding Stipulation, and (2) the standards to be followed in performing the corrective action required by Section VIII.B of the Crowding Stipulation. This Stipulation is intended to resolve both of these issues.

Section VIII of the Crowding Stipulation provides that in the event of any disagreement over the inventory prepared by TDC, plaintiffs and defendants each shall choose an expert, and these two experts shall choose a third expert to resolve the disagreement. Plaintiffs contend that the following items and classes of items belong on the inventory, and have demanded that this dispute be subjected to this procedure:

(1) Whether less than one duplex electrical receptacle per prisoner in each cell constitutes a major structural deficiency and must be remedied under VIII.B.2(c) of the Crowding Stipulation;

(2) Whether TDC's roof repairs fail to meet the requirements of VIII.B.2(c) of the Crowding Stipulation because the roofs lack backup drains and scuppers in certain locations;

(3) Whether TDC is required by Section VIII.B of the Crowding Stipulation to exhaust air directly from the cells in cellblocks that do not back up to a central pipechase (e.g. Wings, 4, 5 and 8 in Ramsey I)

(4) Whether TDC's failure to label all pipes in conformity with the requirements of the American National Standards Institute ("ANSI") constitutes a major structural deficiency and must be remedied under Section VIII.B of the Crowding Stipulation;

(5) Whether TDC is required by Section VIII.B of the Crowding Stipulation to provide each piddling shop with ventilation sufficient to maintain air quality levels that meet the threshold limit values established by the American Conference of Government Industrial Hygienists.

(6) Whether TDC is required by Section VIII.B of the Crowding Stipulation to correct all major structural deficiencies by preparing architectural and engineering drawings and specifications that cite applicable Codes and Standards whenever these corrections (a) increase the capacity or performance requirements or any structure, system, or equipment; (b) change more than 25 percent of an existing HVAC, piping, lighting or power system in a building, building wing or dormitory; or (c) involve a change in occupancy or use of an existing space.

Defendants agree that issues (1) through (4) above are arguably required by Section VIII.B of the Crowding Stipulation and are therefore properly submitted to the dispute resolution procedure provided in that section. Defendants do not agree that

issues (5) and (6) are required by any provision in Section VIII.B of the Crowding Stipulation, and contend that they therefore are not subject to the dispute resolution procedure. However, solely in an effort to resolve these issues, defendants agree to the submission of these items for dispute resolution. This Stipulation, including the agreement about the issues to be arbitrated, therefore constitutes a compromise and settlement of all disputed matters regarding the requirements of Section VIII.B of the Crowding Stipulation.

Subject to the Court's approval, plaintiffs and defendants hereby stipulate as follows:

1. The items and classes of items set forth in this Stipulation constitute all the items or classes of items that are required to be included in the inventory and corrected pursuant to Section VIII.B of the Crowding Stipulation, with the exception of the items to be arbitrated as noted above.

2. The corrective action taken by defendants as required by this Stipulation and the Crowding Stipulation will be evaluated by the standards set forth in this Stipulation.

3. This Stipulation applies only to those units listed in Section II.A.1 of the Crowding Stipulation.

4. Nothing in this Stipulation is intended to modify or otherwise alter any prior stipulation except that this Stipulation is intended to resolve the parties' differences

regarding what TDC must do under Section VIII of the Crowding Stipulation.

5. Nothing in this Stipulation is intended to control or govern the design and construction of any future prison unit (including any prison unit now under construction).

A. GENERAL - CODES AND STANDARDS

1. For purposes of this agreement, "renovation" is intended to mean any revision or modification of any existing building structure, system or equipment.

2. TDC will accomplish the renovation of any structure, system or equipment in a manner so as to meet the Codes and Standards of Section A.4 and A.5 below.

3. If any renovation will have an adverse impact on any related structure, system, or equipment, the related structure, system or equipment will also be modified so as to meet the Codes and Standards of Section A.4 and A.5 below. For purposes of this agreement, an "adverse impact" will occur whenever a renovation will cause the total capacity or performance requirements of the related system, structure, or equipment to exceed the capacity or performance for which the related system, structure or equipment was originally designed. An "adverse impact" will also occur whenever a renovation creates a safety hazard.

4. All TDC renovation and construction projects will be designed and built in accordance with the standards of this and prior stipulations and with the current editions of the following

Codes and Standards (or the future editions when adopted by TDC).

a. Uniform Building Code & UBC Standards
b. Uniform Plumbing Code
c. Uniform Mechanical Code
d. National Electrical Code, NFPA No. 70
e. National Fire Prevention Association (NFPA) National Fire Codes
f. Life Safety Code NFPA No. 101

Where conflicts occur between the above codes or standards and this or prior stipulations, the standards in the stipulations shall be followed unless federal or state laws require otherwise.

5. For all TDC renovation and construction projects, the designer will consider and apply, where relevant, the standards or codes of the following organizations, and will reference them in the applicable section of the specifications.

a. American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code
b. American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE):
   (1) 1988 Handbook of Equipment
   (2) 1987 Handbook of HVAC Systems and Applications
   (3) 1986 Handbook of Refrigeration Systems and Applications
   (4) 1985 Handbook of Fundamentals
   (5) 1984 Handbook of Systems
   (6) ASHRAE Standard of 55-1981, Thermal Environmental Conditions for Human Occupancy
   (7) ASHRAE Standard 62-1981, Ventilation for Acceptable Indoor Air Quality
   (8) ASHRAE Standard 90A-1980, Energy Conservation in New Building Design
   (9) ASHRAE Standard 100.5-1981, Energy Conservation in Existing Buildings - Institutional
c. Underwriters Laboratories, Inc. (UL):
d. American Society for Testing and Materials (ASTM) Standards in Building Codes.
e. American Water Works Association (AWWA):

f. National Electrical Manufacturers Association (NEMA):

g. Sheet Metal and Air Conditioning Contractors National Association (SMACNA):

h. American Gas Association (AGA) Certification Standards

i. National Sanitation Foundation (NSF) standards and approvals for kitchen and scullery equipment, and NSF Standard No. 2 in particular

j. American Concrete Institute (ACI):

k. National Concrete Masonry Association Specification for the Design and Construction of Load-Bearing Concrete Masonry

l. American Institute of Steel Construction (AISC)

m. American Iron and Steel Institute (AISI) Specification for the Design of Cold-Formed Steel Structural Members

n. American Welding Society (AWS):

o. American National Standards Institute (ANSI)

6. Variances to the Codes and Standards of Section A.4 and A.5 may be sought from and approved by the offices of the Safety Administrator, the Assistant Director for Contract Construction, the Assistant Director for Facilities or the organization promulgating the code or standard. Written records of approved variances will be maintained. Cost or expedience will not be grounds for a variance.

7. For every renovation and construction project, TDC will determine if the renovation is going to have an adverse impact as defined in A.(3) above. A renovation will proceed based on architectural and engineering designs, drawings and specifications that cite the applicable codes and standards if it

will have an adverse impact or if it will involve the remodeling of an entire building or building wing.

8. The scope of a project contracted to an outside firm will include the codes and standards to be used and will be provided to the designer prior to the design phase. Additionally, the designer will be provided with identified approved variances and non-code requirements, such as security, communications or use, that may affect the project's design or construction.

9. For all TDC renovation and construction projects, each purchaser, contractor and inspector, whether an independent party or a TDC employee, will be provided with construction documents containing all the detail necessary to ensure the work or product conforms to the design and to the applicable codes and standards.

10. All architectural designs will be prepared under the direct supervision of a registered architect. All engineering designs will be prepared under the direct supervision of a professional engineer or engineers, each of whom will be trained in the appropriate discipline for each aspect of the design: i.e., civil, structural, mechanical and/or electrical.

11. In addition to the major structural deficiencies listed in TDC's December 1986 Inventory, TDC will correct all major structural deficiencies reported to date or in the future by TDC staff, by consultants or by monitors.

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B. HEATING AND VENTILATION

1. CELLBLOCK VENTILATION

a. Cellblock winter ventilation is defined as the minimum supply and exhaust system that must operate year-round in the housing area in order to provide the stipulated 10 cubic feet of fresh or purified air per minute per prisoner (10 cfm/prisoner).

b. The winter ventilation system will provide heat whenever the temperature of the prisoners' living space falls below 70 degrees F.

c. In order to ensure that each prisoner receives 10 cfm fresh air throughout his or her living area, TDC will provide 15 cfm per prisoner of fresh air, (30 cfm of fresh air for each double-bunked cell, including any unoccupied cells), and will exhaust from the pipechase 12.5 cfm of air for each prisoner (25 cfm for each double-bunked cell, including any unoccupied cells.)

(1) The H&V designs will provide the correctly sized and balanced cellblock pipe chase exhaust fans needed to accomplish the required winter airflow rate.

(2) The fan systems now used in some cellblocks to pull air from the cells and recirculate it to corridors or other interior spaces will be altered or replaced with fan systems that exhaust all the cell air required to be exhausted directly to the outdoors (e.g., the 10-Wing transit cells at Central, or the A-Wing lower floor cells at Goree).

(3) The H&V designs prepared by TDC's consultants for all cellblock configurations in which the cells are not backed up to a central pipechase (e.g., Wings 4, 6 and 8 in Ramsey I) will be modified to include the addition of whatever new exhaust fans and ducting are needed to ensure that the 12.5 cfm of fresh air being delivered to each prisoner (25 cfm for each double-bunked cell) is reaching the cells. The ducts will be located so that they deliver the fresh air directly to the cells.

(4) No prisoners will be housed in either or both the East or South buildings at Huntsville after September 1, 1989, or any modified date for completion of the H&V renovations in the other TDC units, unless and until the H&V system of each is renovated to meet the terms of this Stipulation. TDC must make its decision to renovate either or both of the East and South buildings by July 1, 1989, or it will be barred from housing prisoners in both buildings after September 1, 1989.

(5) TDC will adjust the size of the cell exhaust grill openings so as to effect a more nearly uniform distribution of airflow from each cell, particularly on multi-tiered cellblocks where the fans are at the top level.

(6) Any utility room or other similar space within a cellblock will be treated as a cell for supply and exhaust air calculation purposes. Further, any such space shall be connected to the chase exhaust system unless the configuration of the cellblock prohibits such connection.

d. TDC's preventive maintenance program will ensure that all backdraft dampers are routinely inspected, lubricated, and maintained, and that all blades, seals and dampers are checked and, if needed, repaired or replaced. TDC will also inspect all backdraft dampers following any significant windstorm irrespective of any regular maintenance schedule.

e. TDC will provide 2 cfm of exhaust air per square foot for each administrative segregation shower or other non-central shower by installing and using dedicated shower exhaust fans.

f. The winter ventilation system designs will provide for an airflow balance in each prison unit that ensures positive space pressurization in the unit's living areas.

g. The cellblock windows and frames will be repaired and/or replaced in every unit according to the final plans and specifications of the TDC consultants. (Representative samples of what these plans and specifications will involve are included in the July 1987 preliminary plans for the Southern units.)

h. For the heating mode, all heating and ventilation systems will be designed and installed to provide a winter temperature range with no greater variation than 70 degrees F. to 75 degrees F. The maximum permissible space temperature range shall not exceed 68-78 degrees F when the heating mode is on. These systems will deliver 15 cfm of fresh air per prisoner (30 cfm per cell for each double-bunked cell).

i. Existing heating and ventilation units that cannot heat at least 15 cfm of outdoor air per prisoner will be refitted with coils that have a capacity to heat at least 15 cfm of outdoor air per prisoner.

j. Any new or renovated heating and ventilation system serving the prisoner living areas will be sized to handle at least 15 cfm of outdoor air per prisoner.

k. TDC will provide summer cellblock exhaust ventilation at the rate of at least 15 air changes per hour. Where the makeup air is being drawn in through operable windows, these windows will be maintained with screens.

l. Any cellblock not having a sufficient number of screened windows to supply a summer ventilation air exchange rate of 15 air changes per hour will be provided with an alternate supply air system that will supplement the windows being used to deliver a total of 15 air changes per hour.

2. DORMITORY VENTILATION

a. The same winter and summer temperature ranges described in Section B.1 above are applicable to the dormitories.

b. Exhaust fans will be provided for all toilet areas and for any showers in the dormitories.

(1) The toilet exhaust fans will be sized to exhaust a minimum of 1.5 cfm of air per square foot of the floor space being used for toilets, urinals and lavatories, including any of the floor space that would be inside the toilet areas if they were enclosed with walls.

(2) The shower exhaust fans will exhaust no less than 75 cfm of air per shower head.

(3) The toilet exhaust inlet points will be located in the immediate vicinity of the fixtures.

c. The amount of fresh air to be supplied to each dormitory must meet the greater of the following:

(1) 12.5 cfm of fresh air per prisoner assigned to the dormitory, or

(2) 1.2 times the required toilet or shower exhaust fan airflow as defined in B.2.b, above.

d. The required fresh air will be distributed to each dormitory by a system of ducts and supply grills. These grills will be spaced so that there is at least one grill for every 20 feet of dormitory room width. Dormitories with a toilet area in the center of the room will have an air supply at each end of the dormitory.

e. The exhaust fans used for summer ventilation will be sized to move at least 15 air changes per hour.

(1) All existing operable windows will be screened so that they can be used as a makeup air source.

(2) All toilet exhaust fans will operate continuously during both the summer and winter ventilation modes. Shower exhaust fans will be operated whenever showers are being used.

(3) TDC will add additional circulator fans if needed to eliminate any dead air space that is not reached by the

cross-flow from exterior windows or from any alternate supply ventilation system to the roof or wall exhaust fans.

(4) Dormitories not having a sufficient quantity of screened operable windows to supply the required summer ventilation, will be provided with an alternate supply ventilation system.

3. DAYROOM HEATING & VENTILATION

a. Winter Ventilation

(1) No extra fresh air will have to be drawn into any dayroom that is immediately adjacent to a cellblock and has a ventilation system that is connected to the cellblock's ventilation system.

(2) All dayrooms will, however, be provided with air circulation to ensure that the fresh air being delivered to the cellblock is also brought into the dayroom.

(3) The minimum rate of air circulation in each dayroom will be 0.75 cfm of air per square foot of dayroom floor space, with adequate distribution to prevent dead air spaces.

(4) If ventilation cannot be supplied directly to the dayrooms by the same H&V system supplying the cellblock, TDC will use some type of transfer fan system that draws air from the cellblock atrium space.

(5) Any fresh air supplied to a dayroom will be recirculated to the H&V system's return airstream either by a transfer grille to the atrium or corridor or by a direct return air connection in the dayroom.

(6) Any isolated dayroom, defined as a dayroom not tied into a cellblock ventilation system, will be provided with at least 0.25 cfm of fresh air per square foot of dayroom floor space and with a total air circulation rate of at least 0.75 cfm per square foot. The heating and ventilation designs will indicate how the required air circulation and fresh air supply are to be achieved for every such dayroom.

i. The H&V designs prepared by TDC's consultants will specify alternative means for ensuring air motion throughout the entire dayroom.

ii. This air motion must be sufficient to ensure that there is no build up of contaminants in dead air spaces.

(7) If the dayroom H&V system does not provide sufficient heat to meet the required winter ventilation temperature range of 68 to 78 degrees F., TDC will install supplemental heating equipment. Any gas-fired supplemental heating equipment must have a separated fresh air combustion system.

b. <u>Summer Ventilation</u>

(1) Dayrooms will be provided with at least 15 air changes per hour in the summer ventilation mode.

(2) TDC will add separate roof or wall-mounted exhaust fans, if needed to provide 15 air changes per hour.

(3) All new or renovated exhaust fans will be located so as to provide an even distribution of air throughout

each dayroom, taking the different configurations of the various dayrooms into account.

c. The Office of the Special Master will review the dayroom toilet maintenance and housekeeping effort to determine if it, along with the renovated dayroom ventilation, provides adequate odor control. If they do not provide adequate odor control, TDC will install an exhaust fan in each dayroom above the toilet fixture.

4. CONTROLS

a. TDC will install thermostatic sensing devices in the return or exhaust air duct.

b. These devices will be located in a place convenient for repair but inaccessible to prisoners.

c. Separate winter and summer control switches will be provided at the cellblock or dormitory guard station or control picket.

d. If a cellblock or dormitory does not have a guard station or control picket, TDC will locate the winter and summer control switches nearby, where they will be easily accessible to security personnel.

e. An easily understandable sequence of control operation will be posted at each set of switches.

f. Temperature readout instrumentation will also be provided in the same area as the switches to enable the control officer to determine the current space and outdoor air temperature.

g. The summer ventilation system will be activated when the space temperature exceeds 78 degrees F., except that the summer ventilation will not be used when the outdoor temperature is below 60 degrees F. When the outdoor temperature is higher than the indoor space temperature, the summer ventilation system will be deactivated if to continue to operate the system would cause the indoor space temperature to rise. TDC, once the heating and ventilation systems are installed, will devise a formula for determining when the summer ventilation system will be activated. If the Office of the Special Master finds another formula provides more prisoner comfort, it will be adopted. The summer ventilation system will be deactivated when the indoor space temperature falls below 72 degrees F.

5. MAKEUP AIR UNITS

The three basic types of makeup air units proposed for installation at various TDC units will meet the following standards or requirements:

a. All gas-fired makeup air heaters will have the capability both to modulate fuel flow between 50 and 100% of total capacity and to cycle on/off below 50% demand in order to maintain required space temperature. Each makeup heater will recirculate an amount of air from the space that is at least equal to the amount of required makeup air. The heating system will be equipped with a remote thermostat to control the heating operation of the burner in response to space temperature demand.

b. All makeup air heaters with steam coils will have a control valve that modulates to maintain a preset minimum discharge air temperature of 70 degrees F.

(1) Any space heating requirements will be met by other installed radiators or unit heaters.

(2) These heaters will have low temperature shutdown controls to prevent coil freeze up.

c. All makeup air heaters with hot water coils will be provided with modulating control valves that can maintain the minimum discharge temperature air at 70 degrees F. and with low limit controls similar to those discussed in B.5.b above regarding steam coils. Any space heating requirements will be met by other installed radiators or unit heaters, or by makeup air heater systems having recirculated air and a temperature control which responds to a space temperature sensing device located at the return air entry.

6. KITCHEN VENTILATION

a. TDC will provide 15 air changes per hour in kitchens during any time when the kitchens are in use. This ventilation rate will in most cases be provided by the hoods and local exhaust systems described herein. In the event that hoods and local exhaust systems do not provide at least 15 air changes per hour for the overall kitchen area, supplemental room ventilation will be provided.

b. Each exhaust hood serving kitchen equipment will have an exhaust capacity of no less than 150 to 250 cfm of air

per linear foot of hood perimeter, as appropriate for the type of cooking equipment being utilized. In general, the 250 cfm criteria exhaust capacity applies to hoods serving smoke generating processes such as fat fryers, griddles, open top ranges and charbroilers. The 150 to 200 cfm exhaust capacity applies to hoods serving all other cooking and baking functions.

(1) TDC need not, however, replace existing hoods that fail to exhaust 150 to 250 cfm of air as long as TDC provides, through other exhaust methods, 15 air changes per hour in the kitchens.

(2) TDC will repair or replace any hood exhaust fan that is not presently operating to deliver at least its original design air flow rate.

(3) Whenever TDC installs a new hood or replaces an existing hood, the new hood will conform to the Uniform Mechanical Code, section 2003(g).

c. TDC will install high level general room exhaust in any kitchen with a ceiling height more than ten feet.

d. TDC will provide each dishwashing room with exhaust fans capable of providing general room exhaust of at least 30 air changes per hour. In addition, any newly installed or refurbished dishwashing machine will have its own direct exhaust connection.

e. TDC will install in each pot scrub area localized exhaust ventilation equipment that will provide a minimum of 20 air changes per hour.

f. TDC will install a thermostatically controlled ventilation system in every non-air conditioned dry food storage area so as to provide a minimum of 15 air changes per hour in the summer.

g. All kitchen ventilation equipment not operated by automatic control will be provided with manual start/stop controls located in the kitchen area.

h. The kitchen ventilation systems will be balanced to maintain the kitchen at a slightly negative pressure with respect to the adjacent dining areas. The dishwashing rooms and pot scrub rooms will be maintained at a greater negative pressure than the rest of the kitchen. Each kitchen will be provided with sufficient makeup air (with heating systems where required), to prevent any part of the kitchen ventilation from upsetting the ventilation balance in the remainder of the unit.

7. CORRIDORS

a. TDC will provide makeup air in the kitchens, including the dining areas and dishwashing rooms, and in the showers (including any laundry room that is not separated from a shower room by a solid wall). Sufficient makeup air will be provided to these areas to mitigate the existing negative effect of the corridors in each prison unit on the heating and ventilation in the housing areas.

b. The Office of the Special Master will review the effects of the central corridors on the operation of the heating and ventilation system in the living areas, kitchens and cell

wing showers after all other heating and ventilation renovations have been completed. If the corridors are negatively affecting the functioning of the heating and ventilation in these other areas, TDC will make the appropriate adjustments to correct the problem.

8. SUPPLY AIR OUTLET DEVICES

a. Each existing supply air opening will be evaluated and, if the outlet size is larger than required, will be partially blanked out or replaced to ensure that the correct air volume, pattern, and throw distance are being provided.

b. TDC has the discretion, however, to utilize existing heating and ventilation equipment that requires periodic adjustment and continued maintenance, provided that such maintenance is scheduled and consistently performed.

C. ELECTRICAL

1. TDC will provide emergency power on existing units according to the standard attached as Exhibit A.

2. TDC will complete the installation of ground fault protection in all kitchen wet locations as required by the National Electric Code.

3. TDC will provide one receptacle for each electrically heated food cart in remote serving locations.

4. TDC will maintain operational and properly sized light fixtures in each cell, and will promptly replace defective or broken fixtures.

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D. ROOFING

1. TDC will eliminate the problem of leaking roofs. Additional roof scuppers, drains, and corrected slope will be added only to correct conditions related to any roof leak problems.

2. TDC, following roof repair at each unit, will repair all major interior damage caused by roof leaks. Major damage means damage which renders the area non-functional or contributes to unhealthy living conditions. Mere unsightliness is not considered major damage, e.g. water stain or chipped but not flaking paint. Repainting of damaged areas resulting from roof leaks will be included on the preventive maintenance painting schedule.

3. TDC will normally provide reinforced walkways on built-up or membrane roofs around any rooftop equipment that needs regular maintenance or other servicing.

E. HEALTH, LIFE, SAFETY AND EMERGENCY EGRESS

1. TDC will provide sweeps or thresholds on all exterior exit doors and weatherstripping on all exit doors in kitchens.

2. TDC will provide proper storage areas for combustible solids (e.g., paper) and liquids, x-ray films, etc., and smoke detection systems as required by the TDC Safety Administrator in accordance with NFPA Codes and the TDC Occupational Safety and Health Manual.

3. TDC will install fire suppression systems above all kitchen fat fryers, ranges, griddles and broilers, including

kitchens not otherwise under renovation, as required by the NFPA Codes.

F. WATER SYSTEMS AND PIPING

1. The water that TDC provides for inmate consumption and hygiene will meet the standards of the Texas Department of Health.

2. TDC will replace water piping wherever rust and decomposition is in an acute stage.

3. TDC will conform to ANSI standards by identifying all pipes carrying hazardous materials.

4. TDC will isolate shower water feeds where required to prevent temperature/pressure fluctuations in the delivery of water for showers.

5. TDC will provide hot water in all existing showers in accordance with the Uniform Plumbing Code 1988 edition.

6. TDC will provide indirect waste systems for all kitchen food preparation and dishwashing sinks in accordance with the Uniform Plumbing Code.

7. TDC will discontinue the use of and, during renovations, will remove existing plastic drain, waste and vent piping installed above ground inside of buildings except where permitted by the Uniform Plumbing Code and Uniform Building Code.

G. SANITATION

1. TDC will survey the process type ventilation systems (for example, deep fryer exhaust fans) installed in kitchens and